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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,448	09/30/2003	Marc Scott Hodes	HODES 3-10-15-19-13-6	4121
47394	7590	01/28/2009	EXAMINER NAGPAUL, JYOTI	
HITT GAINES, PC ALCATEL-LUCENT PO BOX 832570 RICHARDSON, TX 75083			ART UNIT 1797	PAPER NUMBER
			NOTIFICATION DATE 01/28/2009	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docket@hittgaines.com

Office Action Summary	Application No. 10/674,448	Applicant(s) HODES ET AL.	
	Examiner JYOTI NAGPAUL	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 12 and 13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 12-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/19/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Appellant's appeal brief filed on November 17, 2008 has been acknowledged.

In view of the appeal brief filed on November 17, 2008, PROSECUTION IS HEREBY REOPENED. The new ground of rejection is set forth below. Appellant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is vacated. Action upon claims 1-6 and 12-13 now follows.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/Jill Warden/
Supervisory Patent Examiner, Art Unit 1797

Claim Objections

1. Claims 1 and 5 are objected to because of the following informalities: With regards to claim 1, applicants recite "a first fluid" in line 5 and "a selected liquid" in line 6. It appears that applicants intend to claim the same fluid. Appropriate correction is

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required. With regards to claim 5, applicants recite "a first fluid" in line 5 and "a selected liquid" in line 6. Again, it appears that applicants intend to claim the same fluid.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1-6** are rejected under 35 U.S.C. 102(b) as being anticipated by Lobert (US 4750693).

As well as claims 1 and 6 are understood, Lobert teaches a device for reducing the frictional drag in a moving vehicle such as airborne, waterborne and space vehicles. The device comprises a substrate (i.e., the body of the moving vehicle itself) having at least a first surface (the microstructure in Figures 4a) and a plurality of closed cells (grooves 10) disposed in a predetermined feature pattern on the at least first surface (the microstructure in Figures 4a). (See Col. 5, Lines 54-68) (See Figures 4a-4c) Lobert's device is applicable to vehicle surfaces as exemplified above (Col. 1, Lines 6-10) and it is inherent in Lobert's invention that a particular and chosen movement and direction of a moving body and taking into consideration appropriately selected parameters such as flow velocity, flow direction, drag factors, etc., that one can inherently can change the pressure of a first fluid disposed within the plurality of closed

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cells (10) in order to cause a selected liquid to change the degree of penetration of the feature pattern. It should be noted that Claim 1 is an apparatus claim and that the recitation, “means for changing the pressure of a first fluid disposed within the plurality of closed cells in order to cause a selected liquid to change the degree of penetration of the feature pattern” as recited in claim 1, Lines 5-7 appears to be more appropriately drawn to a method step not germane to patentability in apparatus claim 1. It does not appear that the “means for changing the pressure” structurally forms any part of the apparatus itself.

As well as claim 2 is understood, Lobert further teaches the plurality of closed cells each have at least a first dimension less than 1 millimeter. (See Col. 5, Lines 58-65)

As well as claim 3 is understood, Lobert further teaches the plurality of closed cells each have at least a first dimension less than 1 micron. (See Col. 5, Lines 58-65)

As well as claim 4 is understood, Lobert’s device is applicable to vehicle surfaces in different conditions or parameters (i.e., temperature of the air in a airborne vehicle, temperature of the water in a water vehicle) as exemplified above. Applicants recite “said means for changing the pressure of at least a first fluid comprises means for changing the temperature of said at least a first fluid. It is inherent as the different parameters (i.e., temperature) change in the different conditions as shown above that one can inherently can change the pressure of a first fluid disposed within the plurality of closed cells by changing of the temperature of the at least a first fluid. It should be noted that Claim 4 is an apparatus claim and that the recitation, “means for changing

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the pressure of a first fluid comprises for changing the temperature of said at least first fluid” appears to be more appropriately drawn to a method step not germane to patentability in apparatus claim 1. It does not appear that the “means for changing the pressure” structurally forms any part of the apparatus itself.

As well as claim 5 is understood, applicants recite “wherein said means for changing the pressure of at least a first fluid comprises means for injecting and removing varying amounts of said fluid into and out of said cells, respectively.”. It is inherent in Lobert’s invention that a particular and chosen movement and direction of a moving body and taking into consideration appropriately selected parameters such as flow velocity, flow direction, drag factors, etc., that one can inherently can change the amount of fluid into and out of the cells, respectively. It should be noted that claim 5 is an apparatus claim and that the recitation “said means for changing the pressure of at least a first fluid comprises means for injecting and removing varying amounts of said fluid into and out of said cells, respectively” appears to be more appropriately drawn to a method step not germane to patentability in apparatus claim 1. It does not appear that the “means for changing the pressure of at least a first fluid comprises means for injecting and removing varying amounts of said fluid into and out of said cells, respectively” structurally forms any part of the apparatus itself.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. **Claims 12 and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lobert.

Refer above for the teachings of Lobert.

Lobert fails to explicitly teach that the closed cells have width ranging from about 4 to 25 microns and have a height to width ration ranging from about 0.12 to 0.18.

Lobert does teach an example to determine the dimensions of the grooves/microstructures on the surface of the moving body that depends on the flight

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altitude of 11km, the average free travel length amounts to about 0.3 micron. This means that the dimension of the triangular groove shown in Figure 3 should amount to approximately 0.3 micron times 1.5 micron where the frictional drag can be reduced by 6%. (See Col. 5, Lines 55-68 and Col. 6, Lines 15-25) (See Col. 1, Lines 23-27)

It would have been obvious to one having ordinary skill in the art to provide Lobert with a plurality of closed cells having a width ranging from about 4 to 25 microns and have a height to width ration ranging from about 0.12 to 0.18 to achieve the predictable results of reducing frictional drag and therefore, reducing fuel intake and making the vehicle more economical.

Response to Arguments

8. Applicant's arguments with respect to claims 1-6 and 12-13 have been considered but are moot in view of the new ground(s) of rejection. Refer to the rejection above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JYOTI NAGPAUL whose telephone number is (571)272-1273. The examiner can normally be reached on Monday thru Friday (10:00-7:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JN

/Jill Warden/
Supervisory Patent Examiner, Art Unit 1797